

PATENT

Certificate of Mailing (37 C.F.R. 1.8(a))

I hereby certify that this correspondence is being deposited with the United States Postal Service with sufficient postage as first-class mail in an envelope addressed to: Mail Stop Petition, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450, on the date set forth below.

Roberta Sherman

Name of Person Mailing Paper

Signature of Person Mailing Paper

February 10, 2005

Date of Deposit

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

Application Number: 10/026,667  
Filing Date: 12/21/2001  
Applicant(s): Raul R. Mena  
Entitled: Implant Fixation Device  
Examiner: Cary E. O'Connor  
Group Art Unit: 3732  
Attorney Docket No.: 17147-11

---

Mail Stop Petition  
Commissioner For Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

**PETITION TO WITHDRAW HOLDING OF ABANDONMENT**  
**UNDER 37 C.F.R. §1.181**

Sir:

In response to the Notice of Abandonment mailed December 10, 2004, Applicant hereby petitions the Commissioner to withdraw the holding of abandonment.

On August 29, 2003, Applicant received an Official Action dated August 27, 2003, which was duly docketed on August 30, 2003. Applicant responded to this Action on February 26, 2004. The Response included a Petition for Extension of Time Under 37 C.F.R. §1.136(a) with the small-entity three-month Petition fee of \$475.00, and \$124.00 small entity extra claims fee. Applicant subsequently received back a receipted return postcard evidencing receipt by the Patent Office on March 01, 2004. A copy of the Response filed February 26, 2004, the Petition for Extension of Time, transmittal letter, copy of the check submitted, and return receipt postcard are attached hereto as Exhibit A.

Applicant did not receive any further Official communications from the U.S. Patent and Trademark Office regarding this application until the Applicant received a Notice of Abandonment, dated December 10, 2004, for Application No. 10/026,667, for "Applicant's failure to timely file a proper reply to the Office letter mailed on 04 May 2004." A copy of the Notice of Abandonment is attached hereto as Exhibit B.

A search of the file jacket and the docket records for the subject Application indicates that the Office communication was not received prior to December 10, 2004. The attached Affidavit of Venessa Urena, who is the person responsible for verifying the receipt and docketing of all U.S. Patent and Trademark Office correspondence relating to the subject Application, supports this fact. (Exhibit C).

On December 13, 2004, our office received the Notice of Abandonment dated December 10, 2004. This was the first notice of the outstanding Office Communication dated May 4, 2004. A copy of the outstanding Office Communication dated May 4, 2004 was thereafter obtained via the Private PAIR system. This was the first time that Applicant received the outstanding Office Communication dated May 4, 2004.

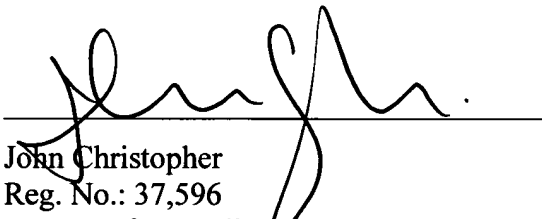
Consequently, the Applicant, through undersigned counsel and pursuant to 37 C.F.R. § 1.181 and M.P.E.P. 711.03(c) subsection II, hereby submits this Petition with supporting documentary evidence including the corresponding copy of the docket report, and without a fee (as no fee is required) establishing without question that the Office Communication dated May 4, 2004 was never timely received by Applicant's counsel prior to the abandonment of the subject Application.

Also enclosed herewith is a Response to the Office Communication dated May 4, 2004 including an Amendment after Final Rejection without a fee (as no fee is required) placing the application in condition for allowance.

Therefore, the above-referenced application did not become abandoned and the Applicant respectfully requests that the Commissioner withdraw the holding of abandonment and allow the patent application to be examined.

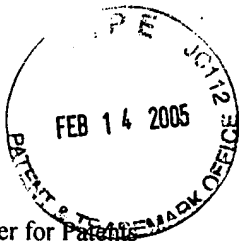
Respectfully submitted,

Date: February 10, 2005



John Christopher  
Reg. No.: 37,596  
Attorney for Applicant(s)  
Christopher & Weisberg, P.A.  
200 East Las Olas Boulevard, Suite 2040  
Fort Lauderdale, Florida 33301  
**Customer No. 31292**  
Tel: (954) 828-1488  
Fax: (954) 828-9122

28415



CHRISTOPHER & WEISBERG, P.A.  
200 East Las Olas Boulevard - Suite 2040  
Fort Lauderdale, Florida 33301  
Telephone: (954) 828-1488; Facsimile: (954) 828-9122

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Re: Application No: 10/026,667 Examiner: Cary E. O'Connor  
Applicant(s): Raul R. Mena Group Art Unit: 3732  
Filing Date: 12/21/2001  
Entitled: IMPLANT FIXATION DEVICE  
Attorney Docket No. 17147-11

Certificate of Mailing (37 C.F.R. 1.8(a))

I hereby certify that this correspondence is being deposited with the United States Postal Service Post Office as first-class mail in an envelope addressed to: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450, on the date set forth below.

February 26, 2004

Roberta Sherman

  
Signature

Date of Signature and Mail Deposit

Name of Person Signing

Sir:

Transmitted herewith is a Reply to the Office Action mailed 08/27/2003.

The following checked items are applicable:

☒ A Petition for Extension of Time and the small-entity extension fee of \$475.00 for filing a response within the third month is herewith enclosed.

☐ A Terminal Disclaimer to Obviate a Double Patenting Rejection Over a Prior Patent is herewith enclosed, as well as the small-entity terminal disclaimer fee of \$55.

☐ Copy of Notice of Change of Correspondence Address is enclosed.

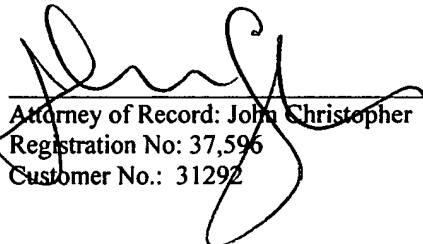
CLAIMS AFTER AMENDMENT:	MINUS PRIOR PAID CLAIMS:	EQUALS PRESENT EXTRA CLAIMS:	RATE:	ADDITIONAL FEE:
Independent: 4	3	1	x \$ 86.00 =	\$86.00
Total: 29	20	9	x \$ 18.00 =	\$162.00
Multiple Dependent Claims (1st presentation)			+\$290.00=	\$ 0
SUBTOTAL ADDITIONAL FEE				\$248.00
Small Entity filing, divide by 2.				\$124.00
TOTAL ADDITIONAL FEE				\$124.00

☒ The fee has been calculated above; enclosed is a check in the amount of \$600.00, including \$475.00 small-entity extension fee and \$124.00 small-entity extra claims fee.

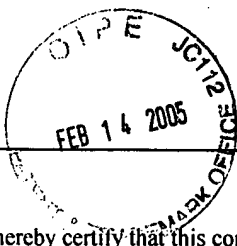
☒ A self-addressed, stamped postcard for verification and receipt is enclosed.

☒ The Commissioner is hereby authorized to credit overpayments or charge payment of any additional fees associated with this communication to Deposit Account No. 502104.

Date: February 26, 2004

  
Attorney of Record: John Christopher  
Registration No: 37,596  
Customer No.: 31292

11671



PATENT

Certificate Of Mailing (37 C.F.R. 1.8(a))

I hereby certify that this correspondence is being deposited with the United States Postal Service with sufficient postage as first-class mail in an envelope addressed to: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

Roberta Sherman

Name of Person Mailing Paper

  
Signature of Person Mailing Paper

February 26, 2004

Date of Deposit

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

In re Patent

Application of: Raul R. Mena

Serial Number.: 10/026,667

Filed: 12/21/2001

Entitled: IMPLANT FIXATION DEVICE

Examiner: Cary E. O'Connor

Group Art Unit: 3732

Atty. Docket No.: 17147-11

PETITION FOR EXTENSION OF TIME UNDER 37 C.F.R. §1.136(a)

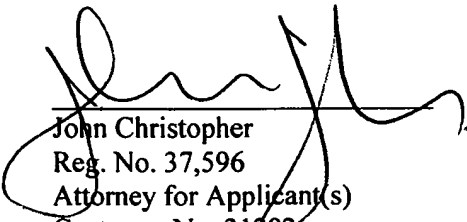
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

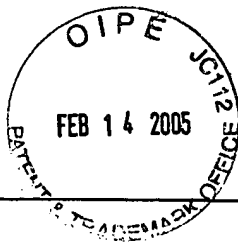
Sir:

Applicant respectfully petitions the Commissioner for a three-month extension of time (37 C.F.R. 1.17(a)(1)) extending to February 27, 2004 the period for response to the Official Action dated August 27, 2003. Payment in the amount of \$475.00 is enclosed as the fee for Applicant's small entity status.

Respectfully submitted,

Date: February 26, 2004

  
John Christopher  
Reg. No. 37,596  
Attorney for Applicant(s)  
Customer No. 31292



PATENT

Certificate of Mailing (37 C.F.R. 1.8(a))

I hereby certify that this correspondence is being deposited with the United States Postal Service with sufficient postage as first-class mail in an envelope addressed to: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450, on the date set forth below.

Roberta Sherman

Name of Person Mailing Paper



Signature of Person Mailing Paper

February 26, 2004

Date of Deposit

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

Serial Number: 10/026,667  
Filing Date: 12/21/2001  
Applicant(s): Raul R. Mena  
Entitled: IMPLANT FIXATION DEVICE  
Examiner: Cary E. O'Connor  
Group Art Unit: 3732  
Attorney Docket No.: 17147-11

---

Commissioner For Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

AMENDMENT

Sir:

In response to the Official Action mailed August 27, 2003, Applicant hereby submits the following amendments, remarks, and request for reconsideration. Applicant also submits herewith a Petition for a Three-Month Extension of Time extending to February 27, 2004 the period for response to the Official Action dated August 27, 2003.

Please amend Claims 1, 18 and 19 as follows:

CLAIMS

Claim 1 (Currently Amended): A fixation device at least partially implantable into tissue, comprising:

a shaft having an outer face;

a threaded portion wound around the outer face and forming a helical groove, at least a part of the threaded portion being implantable into tissue, the threaded portion comprising:

a first face having:

a first end portion in curved contact with the outer face;

a second end portion opposite the first end portion;

a second face having:

a third end portion in curved contact with the outer face;

a fourth end portion opposite the third end portion;

a third face, the third face being coupled to the second end portion and the fourth end portion and being substantially parallel with the outer face; and

at least one transverse slot resulting in separate thread segments whereby the outer face of the shaft is exposed between adjacent thread segments.

Claim 2 (Original): The fixation device according to Claim 1, wherein third face is in curved contact with at least one of the second end portion and the fourth end portion.

Claim 3 (Original): The fixation device according to Claim 1, wherein the third face contacts the second end portion at a first point, and the third face contacts the fourth end portion at a second point.

Claim 4 (Original): The fixation device according to Claim 1, wherein an angle formed by the plane of the outer face and the plane of the second face is between substantially 85 degrees and substantially 125 degrees.

Claim 5 (Original): The fixation device according to Claim 1, wherein an angle formed by the plane of the outer face and the plane of the first face is between substantially 95 degrees and substantially 140 degrees.

Claim 6 (Original): The fixation device according to Claim 1, wherein a distance between the plane of the outer face and the plane of the substantially parallel third face is between substantially 0.25 millimeters and substantially 3 millimeters.

Claims 7 and 8: (Canceled)

Claim 9 (Original): The fixation device according to Claim 1, wherein the shaft and threaded portion form a dental implant, and wherein a distance between the first face, at a region forming the curved contact between the first end portion and the outer face, and the second face, at a region forming the curved contact between the third end portion and the outer face, is between approximately 0.20 millimeters and 2.00 millimeters.



Claim 10 (Original): The fixation device according to Claim 1, wherein the shaft and threaded portion form an orthopedic implant, and wherein a distance between the first face, at a region forming the curved contact between the first end portion and the outer face, and the second face, at a region forming the curved contact between the third end portion and the outer face, is between approximately 0.20 millimeters and 6.00 millimeters.

Claim 11 (Original): The fixation device according to Claim 1, wherein the shaft and threaded portion form a dental implant, and wherein a distance between the third face and the outer face is between approximately 0.25 millimeters and 3.00 millimeters.

Claim 12 (Original): The fixation device according to Claim 1, wherein the shaft and threaded portion form an orthopedic implant, and wherein a distance between the third face and the outer face is at least approximately 0.25 millimeters.

Claim 13 (Original): The fixation device according to Claim 1, wherein the shaft and threaded portion form a dental implant, and wherein a distance between the second end portion and the fourth end portion on an adjacent thread is between approximately 0.30 millimeters and 3.00 millimeters.

Claim 14 (Original): The fixation device according to Claim 1, wherein the shaft and threaded portion form an orthopedic implant, and wherein a distance between the second end

portion and the fourth end portion on an adjacent thread is between approximately 0.30 millimeters and 8.00 millimeters.

Claim 15 (Original): The fixation device according to Claim 1, wherein the shaft and threaded portion form a dental implant, and wherein a length of the third face is between approximately 0.25 millimeters and 3.00 millimeters.

Claim 16 (Original): The fixation device according to Claim 1, wherein the shaft and threaded portion form an orthopedic implant, and wherein a length of the third face is between approximately 0.25 millimeters and 6.00 millimeters.

Claim 17: (Canceled)

Claim 18 (Currently Amended): A dental implant at least partially implantable into oral tissue, comprising:

- a shaft having an outer face;

- a threaded portion wound around the outer face and forming a helical groove, at least a part of the threaded portion being implantable into the oral tissue, the threaded portion comprising:

- a first face having:

- a first end portion in curved contact with the outer face;

- a second end portion opposite the first end portion;

- a second face having:

a third end portion in curved contact with the outer face;  
a fourth end portion opposite the third end portion;  
a third face, the third face being coupled to the second end portion and the fourth end portion and being substantially parallel with the outer face; and  
at least one transverse slot resulting in separate thread segments whereby the outer face of the shaft is exposed between adjacent thread segments.

Claim 19 (Currently Amended): A fixation device at least partially implantable into tissue, comprising:

a shaft having an outer face;  
a plurality of fin sections disposed along at least a portion of the length of the [other] outer face, each of the fin sections being coaxial with the shaft and having a diameter greater than the diameter of the outer face at the disposed location, each of the fin sections comprising:  
a first face having:  
a first end portion in curved contact with the outer face;  
a second end portion opposite the first end portion;  
a second face having:  
a third end portion in curved contact with the outer face;  
a fourth end portion opposite the third end portion;  
a third face, the third face being coupled to the second end portion and the fourth end portion and being substantially parallel with the outer face; and  
at least one transverse slot resulting in separate thread segments whereby the outer face of the shaft is exposed between adjacent thread segments.

Claim 20 (Original): The implant device according to Claim 19, wherein the shaft and the plurality of fin sections form a dental implant.

Please add the following new claims:

Claim 21 (New): The fixation device according to Claim 1, the second face being substantially flat and substantially perpendicular with the third face.

Claim 22 (New): The fixation device according to Claim 21, the second face being substantially perpendicular with the outer face.

Claim 23 (New): A fixation device at least partially implantable into tissue, comprising:  
a shaft having an outer face;  
a threaded portion wound around the outer face and forming a helical groove, at least a part of the threaded portion being implantable into tissue, the threaded portion comprising:

a first face having:

a first end portion in curved contact with the outer face;

a second end portion opposite the first end portion;

a second face being substantially flat and substantially perpendicular with the outer face, the second face having:

a third end portion in curved contact with the outer face;

a fourth end portion opposite the third end portion,; and

a third face, the third face being coupled to the second end portion and the fourth end portion and being substantially parallel with the outer face, wherein the third face is substantially perpendicular with the second face.

Claim 24 (New): The fixation device of Claim 23, wherein an angle formed by the plane of the outer face and the plane of the first face is between substantially 95 degrees and substantially 140 degrees.

Claim 25 (New): The fixation device of Claim 23, wherein the helical groove is substantially flat.

Claim 26 (New): The fixation device of Claim 25, wherein an angle formed by the plane of the helical groove and the plane of the first face is between substantially 95 degrees and substantially 140 degrees.

Claim 27 (New): The fixation device of Claim 23, wherein the second end portion of the first face is in curved contact with the third face.

Claim 28 (New): The fixation device of Claim 23, wherein the fourth end portion of the second face is in curved contact with the third face.

Claim 29 (New): The fixation device of Claim 23, wherein shaft is tapered.

REMARKS

Claims 1-6, 9-16 and 18-29 are now presented for examination. Claims 7, 8 and 17 have been canceled without prejudice and without disclaimer of subject matter. Claims 1, 18 and 19 have been amended. Claims 21-29 have been added as new claims. No new matter has been added. Claims 1, 18, 19 and 23 are independent.

On page 2 of the Office Action, Claims 7 and 8 were rejected under 35 U.S.C. §112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claims 7 and 8 have been canceled.

On page 2 of the Office Action, Claims 1, 3, 6, 8, 9, 11, 13 and 18 were rejected under 35 U.S.C. §102(b) as being anticipated by Lazzara et al. (U.S. Patent No. 5,022,860). Lazzara discloses an ultra-slim dental implant fixture that includes a tapered shaft with external screw-like threads wound about the exterior of the shaft. FIG. 3 shows a lead thread 32 coiled around the shaft 34 with turns extending from the gingival end 36 of the shaft to the tapered apical end 38.

Claim 1, as amended, now recites a fixation device with a threaded portion that includes "at least one transverse slot resulting in separate thread segments whereby the outer face of the shaft is exposed between adjacent thread segments". The support for this can be found in paragraph 19 of Applicant's specification as well as in FIGS. 2 and 4 of the drawings. Lazzara does not disclose or suggest one or more transverse slots that separate the threaded portion of the fixation device into threaded segments to expose the outer face of the shaft between adjacent thread segments. The device disclosed in Lazzara is a continuous screw-like thread that is wound around the shaft in turns, without a slot to separate the thread. Including one or more

slots within the threaded portion 18 provides additional shaft surface area between the fixation device and the patient's tissue to provide a path for blood and tissue matter to escape during the insertion and healing periods.

In sum, Lazzara does not teach or suggest Applicant's invention as recited in amended independent Claim 1 because Lazzara does not disclose a transverse slot that separates the threaded portion of the fixation device in order to expose additional surface area of the shaft. Accordingly, Applicant respectfully asserts that amended Claim 1 is patentable and accordingly requests the withdrawal of the rejection of this claim. Because amended Claim 18 contains the same limitation as described above with respect to Claim 1, Applicant respectfully asserts that amended Claim 18 is also patentable and accordingly requests the withdrawal of the rejection of this claim.

Applicant notes that Claims 3, 6, 9, 11 and 13 depend either directly or indirectly from amended independent Claim 1. Claim 1 is believed to be patentable based on the arguments presented above. Claims 3, 6, 9, 11 and 13 are believed patentable by virtue of their dependency from patentable independent Claim 1. As such, Applicant respectfully requests the withdrawal of the rejection of these claims.

On page 3 of the Office Action, Claims 1, 2, 4-6, 11 and 18 were rejected under 35 U.S.C. §102(e) as being anticipated by Hansson (U.S. Patent No. 6,036,941). Hansson discloses a screw-shaped dental implant having a screw-like thread wound about its shaft. Hansson describes the dimensions of a thread flank and its apex yet fails to describe or suggest the use of a transverse slot to separate the thread-like projections into thread segments in order to expose additional portions of the shaft between adjacent thread segments, as now recited in amended

Claims 1 and 18. Further, Hansson does not include a threaded portion having a third face (see rounded top portion of thread in FIG. 1)

Hansson therefore does not teach or suggest Applicant's invention as recited in amended independent Claims 1 and 18 because Hansson does not disclose a transverse slot that separates the threaded portion of the fixation device in order to expose additional surface area of the shaft. Accordingly, Applicant respectfully asserts that amended Claims 1 and 18 are patentable and accordingly requests the withdrawal of the rejection of this claim. Claims 2, 4-6 and 11 are believed patentable by virtue of their dependency from patentable independent Claim 1. As such, Applicant respectfully requests the withdrawal of the rejection of these claims.

On page 3 of the Office Action, Claims 1, 3, 6-8, 11 and 18 were rejected under 35 U.S.C. §102(b) as being anticipated by Sandhaus (U.S. Patent No. 4,466,796). Sandhaus discloses a dental implant device having continuous, circular threads 5 wound about a cylindrical central portion 3. Sandhaus does not disclose or suggest one or more transverse slots disposed between the thread. In FIGS. 1 and 4, threads 5 are shown to wind completely around central portion 3 without any breaks. Central portion 3 is exposed only between successive thread turns (FIGS. 1 and 4) and not between each thread. The threads do not include a slot that would expose additional area of the shaft between adjacent thread segments.

Sandhaus therefore does not teach or suggest Applicant's invention as recited in amended independent Claims 1 and 18 because Sandhaus does not disclose one or more transverse slots that separate the threaded portion of the fixation device in order to expose additional surface area of the shaft. Accordingly, Applicant respectfully asserts that amended Claims 1 and 18 are patentable and accordingly requests the withdrawal of the rejection of this claim. Claims 3, 6



and 11 are believed patentable by virtue of their dependency from patentable independent Claim

1. As such, Applicant respectfully requests the withdrawal of the rejection of these claims.

On page 3 of the Office Action, Claims 1, 3, 17 and 18 were rejected under 35 U.S.C. §102(e) as being anticipated by Ura (U.S. Patent No. 6,234,797). Ura discloses a dental implant device having an external thread configuration. Applicant respectfully disagrees with the Examiner's assertion that Ura includes "a transverse slot 32 along at least a portion of the threaded portion" as recited in page 4 of the Office Action.

In Ura, FIG. 4 shows a dental implant device having continuous helical threads 35 and 36 wound around main portion 26. The distal end 29 of main portion 26 includes a plurality of cutting edges 32 to provide self-tapping capabilities (col. 5, lines 31-36). Further, in FIG. 4, it is clear that cutting edges 32 are not a part of the helical threads 35 and 36, are not "a transverse slot that results in separate thread segments" and do not "expose the shaft between adjacent thread segments", all of which is now required by the language of amended Claims 1 and 18. Finally, in FIG. 6, an elevational bottom view of the distal end of the device, cutting edges 32 can be seen. From FIG. 6, it is clear that cutting edges 32 are located *within* the periphery of the main portion and therefore cannot represent breaks in the threads, which are externally disposed on the outer face of the main shaft.

Therefore, Ura does not teach or suggest Applicant's invention as recited in amended independent Claims 1 and 18 because Ura does disclose a transverse slot which separates the threaded portion of the fixation device in order to expose additional surface area of the shaft between adjacent thread segments. Accordingly, Applicant respectfully asserts that amended Claims 1 and 18 are patentable and accordingly requests the withdrawal of the rejection of this

claim. Claim 3 is believed patentable by virtue of its dependency from patentable independent Claim 1. As such, Applicant respectfully requests the withdrawal of the rejection of this claim.

On page 4 of the Office Action, Claims 19 and 20 were rejected under 35 U.S.C. §102(b) as being anticipated by Niznick (U.S. Patent No. 5,061,181). Niznick discloses a dental implant device having circumferential projections 33-39 (FIG. 2) and threads 46-47 (FIG. 2) wound around the external portion of body portion 11. In the embodiment shown in FIG. 1, flute 16 and projections 15 extend outwardly from body portion 11.

Claim 19 requires that the fin sections disposed along at least a portion of the length of the outer face have “a diameter greater than the diameter of the outer face at the disposed location”. Clearly, in the embodiment shown in FIG. 1 of Niznick, the diameter between the projections (flute 16 and projections 15) is greater than the diameter of the projections themselves. In the alternate embodiment of FIG. 2, projections 33-39 are continuous around the outer face of body portion 11. Niznick does not disclose “at least one transverse slot resulting in separate thread segments whereby the outer face of the shaft is exposed between adjacent thread segments” as now recited in amended Claim 19.

Therefore Niznick does not teach or suggest Applicant’s invention as recited in amended independent Claim 19 because in one embodiment, Niznick does not teach or suggest the use of projections where the diameter of the projections is greater than the diameter of the outer face at the disposed location, and, in an alternate embodiment, Niznick does not teach or suggest the use of a transverse slot which separates the threaded portion of the fixation device in order to expose additional surface area of the shaft. Accordingly, Applicant respectfully asserts that amended Claims 19 is patentable and accordingly requests the withdrawal of the rejection of this claim.

Claim 20 is believed patentable by virtue of its dependency from patentable independent Claim

19. As such, Applicant respectfully requests the withdrawal of the rejection of this claim.

On page 4 of the Office Action, Claims 10, 12, 14 and 16 were rejected under 35 U.S.C. §103(a) as being unpatentable over Lazzara in view of Grell et al. (U.S. Patent No. 4,177,524).

In light of the above arguments, Claims 10, 12, 14 and 16 are believed patentable by virtue of their dependency from patentable independent Claim 1. As such, Applicant respectfully requests the withdrawal of the rejection of these claims.

On page 4 of the Office Action, Claim 15 was rejected under 35 U.S.C. §103(a) as being unpatentable over Lazzara. In light of the above arguments, Claim 15 is believed patentable by virtue of its dependency from patentable independent Claim 1. As such, Applicant respectfully requests the withdrawal of the rejection of this claim.

New claims 21-28 provide additional features not disclosed or suggested in the cited art. Claim 21 depends indirectly from independent Claim 1 and provides that the second face of the threaded portion (28) be flat and substantially perpendicular to the third face (30) of the threaded portion. The relationship between the second face and third face provides improved shear force resistance over the cited references. Hansson (FIG. 1) and Lazzara et al. (FIG. 3A) describe an angled "second face". The support for this claim can be found in the figures and in paragraph 23, line 4, and paragraph 30, line 3 of the specification.

New Claim 22 is indirectly dependent from independent Claim 1 and provides that the second face (28) be substantially perpendicular with the outer face (24) of shaft (16). Hansson, Lazzara et al. and Sandhaus each disclose threaded portions having a second face that is angled and not perpendicular with the outer face of the shaft. Support for this claim can be found in FIGS. 3 and 5. New independent Claim 23 incorporates each of the features described above.

The advantage provided by the perpendicular relationship between the second face and the third face of the threaded portion, and the second face and the outer face of the shaft, which is not provided by the “angled” configuration of the cited art, is that the shear forces are minimized.

New Claim 24 depends from new independent Claim 23 and defines the downward sloping first face (26) and its relationship to outer face (24). Claim 24 recites a fixation device where the angle formed by the plane of the outer face and the plane of the first face is between substantially 95 degrees and substantially 140 degrees. Support for this claim can be found in the drawing figures and in paragraph 23, lines 7-10 of the specification.

New Claim 25 depends from new independent Claim 23 and describes the helical groove (20) being substantially flat. Ura (FIGS. 5 and 14) and Sandhaus (FIGS. 1 and 3) disclose a shaft having a groove that is not uniform, includes elliptical ridges and is not substantially flat. FIGS. 1, 3 and 5 of Applicant’s application illustrates the flat surface of the helical groove.

New Claim 26 depends from new independent Claim 23 and defines the downward sloping first face (26) and its relationship to helical groove (20). Claim 26 recites a fixation device where the angle formed by the plane of the helical groove and the plane of the first face is between substantially 95 degrees and substantially 140 degrees.

New Claim 27 depends from new independent Claim 23 and describes the curved contact between the second end portion (34) of the first face (26) and the third face (30). Ura (FIG. 5), Sandhaus (FIG. 3) and Lazzara et al. (FIG. 3A) all disclose a sharp edge between the first face and the third face of the thread. Support for this claim can be found in paragraph 26, lines 5-7.

New Claim 28 depends from new independent Claim 23 and describes the curved contact between the fourth end portion (38) of the second face (28) with the third face (30). Ura (FIG.

5), Sandhaus (FIG. 3) and Lazzara et al. (FIG. 3A) all disclose a sharp edge between the second face and the third face of the thread. Support for this claim can be found in paragraph 27, line 1.

Applicant thanks the Examiner for pointing out the typographical error in Claim 19. The word "other" has been replaced by "outer" in line 3 of the claim.


Regarding the Information Disclosure Statement filed July 10, 2002, the undersigned faxed copies of the previously omitted references and discussed these references with the Examiner in a September 8, 2003 telephonic interview. In the Interview Summary, the Examiner has indicated receipt of the faxed copies and has stated that the 1449 form will be signed off in the next Office Action.

For all of the above reasons, the claim objections are believed to have been overcome placing Claims 1-6, 9-16 and 18-29 in condition for allowance, and reconsideration and allowance thereof is respectfully requested.

The Examiner is encouraged to telephone the undersigned to discuss any matter that would expedite allowance of the present application.

Respectfully submitted,

Date: February 26, 2004



John Christopher  
Reg. No.: 37,596  
Attorney for Applicant(s)  
Christopher & Weisberg, P.A.  
200 East Las Olas Boulevard, Suite 2040  
Fort Lauderdale, Florida 33301  
Customer No. 31292  
Tel: (954) 828-1488  
Fax: (954) 828-9122

QUANTUM BIOENGINEERING  
LTD. PARTNERSHIP

201 N. UNIVERSITY DR., STE. 101  
PLANTATION, FL 33324

1739

DATE

2/25/04

63-965-660

Pay to the order of Director of U.S. Patent & Trademark Office \$600.00  
Six hundred & 00/100

Northern Trust Bank of Florida, N.A.  
Ft. Lauderdale, Florida



Northern Trust

Lara [Signature]

FOR

⑆001739⑆ ⑆066009650⑆ 1410011955⑆

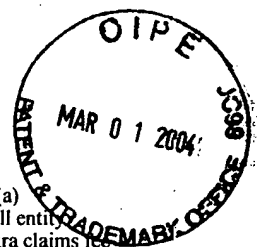
**USPTO: PLEASE VERIFY, STAMP  
DATE RECEIVED AND RETURN**

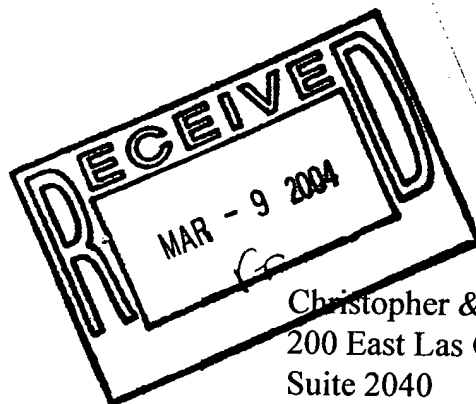
February 26, 2004

Attorney Docket No. 17147-11  
U.S. Patent Application sn. 10/026,667  
Filed: December 21, 2001  
Applicant(s): Raul R. Mena  
Examiner: Cary E. O'Connor- Art Unit: 3732  
For: IMPLANT FIXATION DEVICE

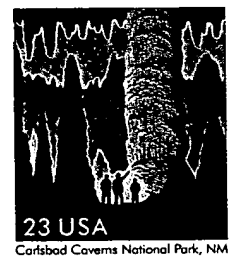
**Received by Commissioner for Patents, the following:**

1. Amendment
2. Petition for Extension of Time Under 37 C.F.R. 1.136(a)
3. Check to Director for \$600.00, including \$475.00 small entity  
three-month Petition fee and \$ 124.00 small-entity extra claims fee
4. Transmittal Letter





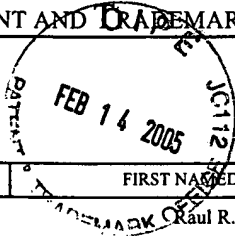
Christopher & Weisberg, P.A.  
200 East Las Olas Boulevard  
Suite 2040  
Fort Lauderdale, FL 33301







# UNITED STATES PATENT AND TRADEMARK OFFICE



UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/026,667

12/21/2001

Raul R. Mena

17147.00011

7032

31292

7590

12/10/2004

CHRISTOPHER & WEISBERG, P.A.  
200 EAST LAS OLAS BOULEVARD  
SUITE 2040  
FORT LAUDERDALE, FL 33301

EXAMINER

O CONNOR, CARY E

ART UNIT

PAPER NUMBER

3732

DATE MAILED: 12/10/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

# Notice of Abandonment

Application No.

10/026,667

Examiner

Cary E. O'Connor

Applicant(s)

MENA, RAUL R.

Art Unit

3732

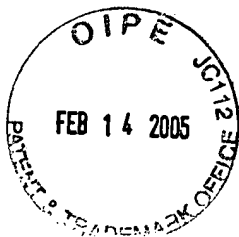
-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

This application is abandoned in view of:

1. ☒ Applicant's failure to timely file a proper reply to the Office letter mailed on 04 May 2004.
  - (a) ☐ A reply was received on \_\_\_\_\_ (with a Certificate of Mailing or Transmission dated \_\_\_\_\_), which is after the expiration of the period for reply (including a total extension of time of \_\_\_\_\_ month(s)) which expired on \_\_\_\_\_.
  - (b) ☐ A proposed reply was received on \_\_\_\_\_, but it does not constitute a proper reply under 37 CFR 1.113(a) to the final rejection.  
(A proper reply under 37 CFR 1.113 to a final rejection consists only of: (1) a timely filed amendment which places the application in condition for allowance; (2) a timely filed Notice of Appeal (with appeal fee); or (3) a timely filed Request for Continued Examination (RCE) in compliance with 37 CFR 1.114).
  - (c) ☐ A reply was received on \_\_\_\_\_ but it does not constitute a proper reply, or a bona fide attempt at a proper reply, to the non-final rejection. See 37 CFR 1.85(a) and 1.111. (See explanation in box 7 below).
  - (d) ☒ No reply has been received.
2. ☐ Applicant's failure to timely pay the required issue fee and publication fee, if applicable, within the statutory period of three months from the mailing date of the Notice of Allowance (PTOL-85).
  - (a) ☐ The issue fee and publication fee, if applicable, was received on \_\_\_\_\_ (with a Certificate of Mailing or Transmission dated \_\_\_\_\_), which is after the expiration of the statutory period for payment of the issue fee (and publication fee) set in the Notice of Allowance (PTOL-85).
  - (b) ☐ The submitted fee of \$\_\_\_\_\_ is insufficient. A balance of \$\_\_\_\_\_ is due.  
The issue fee required by 37 CFR 1.18 is \$\_\_\_\_\_. The publication fee, if required by 37 CFR 1.18(d), is \$\_\_\_\_\_.
  - (c) ☐ The issue fee and publication fee, if applicable, has not been received.
3. ☐ Applicant's failure to timely file corrected drawings as required by, and within the three-month period set in, the Notice of Allowability (PTO-37).
  - (a) ☐ Proposed corrected drawings were received on \_\_\_\_\_ (with a Certificate of Mailing or Transmission dated \_\_\_\_\_), which is after the expiration of the period for reply.
  - (b) ☐ No corrected drawings have been received.
4. ☐ The letter of express abandonment which is signed by the attorney or agent of record, the assignee of the entire interest, or all of the applicants.
5. ☐ The letter of express abandonment which is signed by an attorney or agent (acting in a representative capacity under 37 CFR 1.34(a)) upon the filing of a continuing application.
6. ☐ The decision by the Board of Patent Appeals and Interference rendered on \_\_\_\_\_ and because the period for seeking court review of the decision has expired and there are no allowed claims.
7. ☐ The reason(s) below:

  
Cary E. O'Connor  
Primary Examiner  
Art Unit: 3732

Petitions to revive under 37 CFR 1.137(a) or (b), or requests to withdraw the holding of abandonment under 37 CFR 1.181, should be promptly filed to minimize any negative effects on patent term.



PATENT

Certificate of Mailing (37 C.F.R. 1.8(a))

I hereby certify that this correspondence is being deposited with the United States Postal Service with sufficient postage as first-class mail in an envelope addressed to: Mail Stop Petition, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450, on the date set forth below.

Roberta Sherman

Name of Person Mailing Paper

  
Signature of Person Mailing Paper

February 10, 2005

Date of Deposit

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

Application Number: 10/026,667  
Filing Date: 12/21/2001  
Applicant(s): Raul R. Mena  
Entitled: Implant Fixation Device  
Examiner: Cary E. O'Connor  
Group Art Unit: 3732  
Attorney Docket No.: 17147-11

---

Mail Stop Petition  
Commissioner For Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

AFFIDAVIT OF VENESSA M. URENA

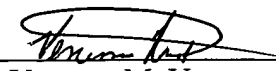
Before me this day personally appeared Venessa M. Urena who, being duly sworn, deposes and says:

1. My name is Venessa M. Urena.
2. I am an Intellectual Property law paralegal with the law firm of Christopher & Weisberg, P.A.

3. My responsibilities as an Intellectual Property law paralegal include maintaining the patent and trademark docketing system, preparing filing packets for submission to the United States Patent and Trademark Office, and reporting to our clients selected communications received from the United States Patent and Trademark Office.
4. I am responsible for overseeing the docketing of all correspondence with the United States Patent and Trademark Office for applications having the applicant name "Raul Mena" and the client series identified as "Quantum BioEngineering, Ltd." Client No. 17147.00011.
5. If an Office Communication had been received by the firm for U.S. Patent Application No. 10/026,667 on or about May 4, 2004, it would have been routed to my desk for proper docketing in the Christopher & Weisberg docketing system. A search of our docketing system and the file wrapper confirmed that no such Office Communication was received.
6. On December 13, 2004, our office received the Notice of Abandonment dated December 10, 2004. This was the first notice of the outstanding Office Communication dated May 4, 2004.
7. A copy of the complete docket report showing all activity for U.S. Patent Application No. 10/026,667 in the name of Raul R. Mena is attached.

FURTHER AFFIANT SAYETH NAUGHT.

Signature of Affiant:

  
\_\_\_\_\_  
Venessa M. Urena

STATE OF FLORIDA                    )  
  ) ss:  
COUNTY OF BROWARD                )

Sworn to (or affirmed) and subscribed before me this 9th day of February, 2005, by Venessa M. Urena.

Personally known ✓  
OR Produced Identification                       
Type of Identification Produced                     

Notary Signature 

Print, type or stamp name of notary: Roberta Sherman

(SEAL)



Roberta Sherman  
My Commission BD156764  
Expires November 25, 2006

29666

# Events US Patent File

---

**Matter ID/Client Sort****Matter Description****Initials****Event Date****Notes****17147-11 / Quantum**US Patent for IMPLANT FIXATION  
DEVICEWARNING: Field  
name missing

12/21/2001

Patent application filed (for patents filed on  
or after 6/8/95)

Application Serial No.: 10/026,667

Application Filing Date: 12/21/2001

Publication Date: 8/1/2002 Publication No.: US-2002-0102518-A1

Type: Utility

Status: Published

Entity: Small

Assignee: Quantum

**Child Date****Notes**

---

1/18/2002

Notice of Missing Parts received from Patent and Trademark Office (date of mailing)

3/18/2002

Last day to respond to Notice of Missing Parts - 3/15/02

3/21/2002

Check: first filing receipt received - 1/18/02

5/28/2002

Information Disclosure Statement filed

6/20/2002

Assignment filed

8/1/2002

Publication of patent

10/18/2002

Corrected Notice of Allowance rec'd

4/10/2003

Status Letter to PTO

8/27/2003

Office Action

12/3/2003 9:53 AM

RE Quantum Dr Mena.msg

1/20/2004 10:11 AM

17147-11 Quantum.msg

1/23/2004 10:03 AM

Mena 17147-11.msg

2/26/2004

Response to Office Action filed with 3 mo. extension

12/10/2004

Notice of Abandonment received from Patent and Trademark Office

2/10/2005

Last day to file petition to withdraw holding of Abandonment

12/21/2021

Patent expires (eligible for up to 5 years extension due to prosecution delays)